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10/552,655	10/11/2005	Felix Flachsmann	102790-128 (30044 US)	2738
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EXAMINER				
GRESO, AARON J				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/552,655

Applicant(s)

FLACHSMANN ET AL.

Examiner

AARON GRESO

Art Unit

1796

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date 10/11/2005
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

DETAILED ACTION

Specification Objections

The disclosure is objected to because of the following informalities: There appears to be a typo-error where J[•] is representing what should be an I[•] (iodine radical) (page 8 line 20). No explanation for this terminology is otherwise presented.

Appropriate correction is required.

Claim Objections

Claim 9 is objected to because of the following informalities: There appears to be a typo-error where J[•] is representing what should be an I[•] (iodine radical).

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 12-15 are rejected under 35 U.S.C. 102(b) as being anticipated by *Meigs* (US 2197479).

Meigs (col 1 lines 15-26 and 45-56 and col 2 lines 2-7), shown in Figure 1 below, discloses a genus of chemicals including those claimed by the Applicant. As indicated, Figure 1 b) shows an alkoxy substituted group (R-O-), with R representing an alkyl cyclic alicyclic saturated or unsaturated group including a straight or branched chain, on the end of a divalent organic radical (R') that can range from ethyl to n-propyl or isopropyl, and cyclohexyl, among a short list of other carbon radicals. This successive chain of the genus-allowed moieties is also attached to a carbamate that comprises a nitrogen that can be attached to one or two hydrogen atoms, or can be attached to one or more carbon radicals where either R² or R³ groups are represented by organic radicals "such as ethyl or methyl" (col 1 lines 25-26).

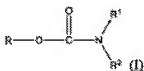


Figure 1 a) Application genus.

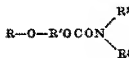


Figure 1 b) *Meigs* genus.

When the reference's R, R', R² and R³ are respectively represented by ethyl, cyclohexyl, with N,N ethyl and ethyl groups, a chemical with the molecular weight of 29 + 16 + 82 + 16 + 12 + 16 + 14 + 29 + 29, or by summing, a molecular weight of approximately 227. With R² and R³ corresponding to the Applicants' R¹ and R², and when R-O-R' is taken as the Applicant's R {where the Applicant's R is thus represented

by a cycloalkylalkyl that is optionally substituted with an alkoxy group}, the chemical is readily envisioned within the Applicants' genus.

The reference (*Examples I and II col 3 lines 28-66*) provides methods of manufacturing the chemicals in the genus that are indicated to be used for applications in cosmetics and perfumes (*col 4, line 46-47*).

The reference encompasses and teaches the Application's Claims. Therefore, Claims 1-3, and 12-15 are rejected.

Claims 1, 4, 7-8, 16-17 are rejected under 35 U.S.C. 102(b) as being anticipated by *Moller et al.* (US 4382765).

Moller et al. (*col 3 lines 1-10-21*) discloses a genus shown in Figure 2 below. For the cyclic materials in the genus: R₄ is a linear alkalene (taken as linear and comprising -CH₂- groups) having 2-4 carbons, and R₃ is an alkyl having 2-4 carbons (*col 2 lines 25-27*). When R₄ comprises four -CH₂- groups and R₃ is an ethyl group, the heterocyclic ring comprises 5 carbons, one oxygen, and one nitrogen and has a molecular weight of {16x2 + 14 + 12+ 4x12 + 4x2x1 + 2x12+ ((2x2x1)+1) = 32+14+84+13 =} 143. The odorous attributes of the chemical are inherent and expected to be readily identifiable.

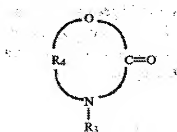


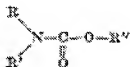
Figure 2. Cyclic and genus of *Moller et al.* (*col 3 lines 1-21*).

The chemicals are used for skin care and skin cleaning compositions (abstract) and are mixed with other perfume oils (*cols. 7-8 Examples 1, 3*). The genus chemicals are disclosed as being made and subsequently, inherently disclosed as being mixed in order to be demonstrated in cosmetic preparations explicitly disclosed by the reference.

The reference's disclosure encompasses the Applicant's claims. Therefore Claims 4, 7-8, 16-17 are rejected.

Claim 5 is rejected under 35 U.S.C. 102(b) as being anticipated by *Jager et al.* (US 3203853).

The reference (*col 1 lines 45-65*) discloses compositions comprising the genus shown in Figure 5. As shown in Figure 5, the reference's R and R' and R" equate to the Application's R1 and R2 and R respectively (see figure 1a).



R = H, alkyl, alkylenyl, cycloalkyl, aralkyl (taken as an aryl group substituted for an alkyl hydrogen) radicals

R' = H, alkyl, alkylenyl, cycloalkyl, aralkyl and substituted Phenyl radicals

R'' = alkyl, alkylenyl, cycloalkyl, aralkyl and substituted Phenyl radicals while also being a phenoxyethyl radical

R and R' may together comprise heterocyclic ring

(Note: the reference indicates, by example, that cyclohexyl is included in the meaning of cycloalkyl (*col 3 line 6*); lower alkyl groups are also demonstrated as being represented by methyl, propyl, and isopropyl (*col 2 lines 4-12*)).

Figure 5. *Jager et al.* genus (*col 1 lines 45-65*).

The reference further demonstrates possible chemical meanings for the alkyl and phenyl groups that may be substituted, comprising methyl carbamates such as

Phenylxyethyl-N-methylcarbamate and also teaches of using 2-isopropyl-3-methylphenyl-N [,N] diisopropyl carbamate, as well as cyclohexyl-N-methylcarbamate (col 3 lines 3-12).

When the reference's R, R' and R" are respectively methyl, methyl and 2-ethoxy phenyl, an Application chemical is identified (2-ethoxy-phenyl, methyl, methyl, top line, page 5 of 10 of instant Claims). {In addition, when R" is represented by a cyclohexyl group and both of the references R and R' groups are ethyl, the first chemical in instant Claim 11 is shown}. Also, when a methyl group is substituted for hydrogen of *Jager et al.*'s 2-ethoxy-phenyl N methyl carbamate, allowed for in *Jager et al.*'s genus (col 3, item 7, line 9), resulting in 2-ethoxy-phenyl N,N dimethyl carbamate, a chemical within the list instant Claims 5 and 10 (page 7, 4th line from bottom of page) is identified. These examples show that the reference's genus comprises chemicals in the Application's formula I genus and chemicals in instant Claim 5.

The reference readily allows one to envision chemicals named in the Application's Claim 5. Therefore, Claim 5 is rejected.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The Supreme Court in *KSR International Co. v. Teleflex Inc.* identified a number of rationales to support a conclusion of obviousness which are consistent with the proper “functional approach” to the determination of obviousness as laid down in *Graham*. The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Exemplary rationales that may support a conclusion of obviousness include:

- (A) Combining prior art elements according to known methods to yield predictable results;
- (B) Simple substitution of one known element for another to obtain predictable results;
- (C) Use of known technique to improve similar devices (methods, or products) in the same way;
- (D) Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results;
- (E) “Obvious to try” – choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success;

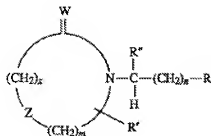
Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Peck et al.* (US 5472946).

The reference (*col 9 lines 36-51*) teaches compositions comprising types of chemicals that can be used with other materials for providing fragrances to the skin.

However, the reference does not distinctly name or identify a chemical particularly specified by the Application's specification.

On the other hand, *Peck et al.* (col 2 lines 32-64) discloses a genus according to Figure 4 shown below.

Figure 4 discloses a member of the species' in the Application's genus when the reference allows for W= oxygen, x=0, Z = oxygen, m=3, R' = methyl, R'' = hydrogen, R = methyl, and n = 1. In this case, the Application's R¹ is represented by an ethyl group; the R2-R ring comprises, in order, a tertiary nitrogen, -(C=O)-O- , and -(CH₂)₃ with a -CH₃ methyl group. This situation also satisfies the 5 member ring requirement with N representing one member and the remaining carbonyl group + the oxygen in the ring + the three -CH₂ groups add up to 5. [The number is six if the methyl group protruding from the ring is counted.]



wherein W represents oxygen, sulfur, or two hydrogen radicals;

Z represents oxygen, sulfur, or $\text{---CH}_2\text{---}$;

R represents alkyl optionally substituted with one to three double or triple bonds, $\text{---SR}''$, $\text{---OR}'''$, $\text{---NHR}''$, ---CH_3 , or COOR_1 , and wherein R_1 represents hydrogen or lower alkyl;

R''' represents alkyl, alkylthioalkyl, alkoxyalkyl, substituted aminoalkyl, optionally substituted with a phenyl, benzoyl or heterocyclic group;

R' represents hydrogen, alkyl, alkoxy, acyloxy, alkylthio, hydroxy, $\text{---(CH}_2\text{)}_y\text{COOR}_1$ and with y being between zero and 3, inclusive;

R'' represents hydrogen or $\text{---(CH}_2\text{)}_y\text{COOR}_1$ such that when R'' is hydrogen, then W is two hydrogen radicals and R' is not hydrogen; and when R' is hydrogen, then R'' is not hydrogen;

and m is between one and 5, while n is between 1 and 24, and x is zero or 1, inclusive.

Figure 4. Genus of *Peck et al.* (Abstract).

In accord with MPEP 2144.04 II. A: "Omission of an Element and Its Function Is Obvious If the Function of the Element Is Not Desired", an element constraint of the references genus may be omitted if the constraint is not required in the reference. The reference teaches no limitations on the reasoning as to why the conditions of R'' must

be met. Therefore, it would be obvious, at the time of the invention to have least-weighted the proviso of R".

It would have been obvious at the time of the invention, to have applied the teachings of Peck et al. towards a successful invention ready for improvement, within a number of limited choices, and to have further limited the possible element structure investigation, to arrive at a chemical genus of the Application's Claim 4. Therefore, Claim 4 is rejected.

Claims 5, 10, 11, 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Jager et al.* (US 3203853) as applied to Claim 5 above, in view of *Moller et al.* (US 4382765) as applied to Claims 1 and 4 above.

Jager et al., as applied to Claim 5 above, show a genus (see Figure 5 above) with examples that indicate chemicals in instant Claims 10 and 11 as discussed above.

However, the reference does not further accentuate the applications of the chemicals in the reference's genus chemicals towards applications of fragranced products.

On the other hand, *Moller et al.* (as applied to Claims 1, 4) show applications of similar products, in the Applicants' chemical genus, used in similar applications to those Claimed by the Applicants'. To further address invention attributes for Claims 18-19, these applications include: skin care and skin cleaning compositions (*abstract*) and are mixed with other perfume oils (*cols. 7-8 Examples 1, 3*).

It would have been obvious at the time of the invention to have used similar chemicals for similar applications for a successful product, ready for improvement, to yield predictable results. Therefore, Claims 5, 10-11, 18-19 are rejected.

{Note, odorous or fragancing chemicals are known to have applications of the type indicated by Jager et al. See informational reference: Eddy et al., pp 763-767 of Journal of Economic Entomology Vol 39 no. 6 1946 for uses of menthol, (col 2 line 24); two chemicals in the Applicant's genus [N-ethyl-N-phenylurethane and N-methyl-N-phenylurethane (col 2 lines 8 and 33) --see USPTO drawn chemical structure from informational reference "J. of Econ. Ent. Vol 39 no. 6 pp 763-767 Eddy et al. & Appended Structure.pdf" with appended, Applicant's formula (I) chemical genus drawn in accord with "Chemdraw Ultra v. 10" software when R is ethyl and R1, R2 are either ethyl or methyl with a Phenyl]; and p-ethoxy benzaldehyde, (col 2 line 3) that is discussed in informational reference "MAKEMEHEAL product data sheet--p-ethoxy benzaldehyde".}

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Bohl* (US 2517965) in view of *Jung* (US 6399808).

Bohl (col 3 line 62-63) teaches of making haloformates, including chloroformate, to make carbonate esters or secondary or tertiary or secondary carbamate esters by first using a strong inorganic base or alkaline material; these haloformates are then reacted with primary or secondary amines; the invention being applicable to numerous

carbamates. Thus, the reference teaches making secondary or tertiary carbamates; this being indicated as being necessary in the first step of Claim 9.

The reference does not further disclose requiring an additional step to make a tertiary tertiary carbamate.

On the other hand, *Jung* (Figure 3 Sheet 3 of 5 and col 60 lines 20-60, and claims 1-16) teaches a method of "N-alkylation" (col 57-col 58 lines 63-69 and lines 60-69) or making a tertiary carbamate from a secondary carbamate by reacting the secondary carbamate with a catalyst sufficient to promote carbamate synthesis (claim 1 col 63), the type of which is indicated by the reference to not be limited by the specific embodiments presented (col 63, 13-21). The reaction produces the tertiary amine after the secondary amine is made in one "pot" (Figure 3, Sheet 3 of 5).

The tertiary amine is made when after the R^xX group, the X represented by an halide that can be bromine (claim 1, col 63 Example 20 col 16 line 50) or chlorine (Example 93 col 59 line 5-20), and the R^x; being represented by a group consisting of an alkane having 1-18 carbons, cyclohexyl, or phenyl groups among others (claim 1 col 63 and claim 16, col 64 and the abstract); is allowed to react with the secondary amine using the "N-alkylation" method (col 57-col 58 lines 63-69 and lines 60-69). The chemicals made comprise the formula RR'-N-CO₂-R" where R and R' are each directly bonded to the nitrogen and where the components for R and R' can be the same as those for R" (abstract).

With motivation to use "one pot" for making tertiary amines similar to those disclosed by *Jung*, it would have been obvious to one of ordinary skill in the art to have

tried combining the prior art elements according to older and known synthesis methods of *Bohl* along with those introduced by a successful method by *Jung* to yield predictable results with a reasonable expectation of success when applying these efforts towards similar successful products ready for improvement. Therefore, Claim 9 is rejected.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AARON GRESO whose telephone number is (571)270-7337. The examiner can normally be reached on M-F 0730-1700.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571 272 1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/James J. Seidleck/

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Supervisory Patent Examiner, Art Unit 1796

AJG